

drugs? explosives?

Scentinel® mobile detection device gives you
forensic quality trace detection in seconds



no delay, no doubt

“The direct analysis (of trace explosives) by mass spectrometry transformed the traditional day-long quantification analysis of solvent extraction chromatography to minutes, eliminated any sample loss in the extraction steps, and allowed the transfer efficiency to be quantified for every test surface...”

Tam, M.; Pilon, P. and Zaknoun, H. (2013), Quantified Explosives Transfer on Surfaces for the Evaluation of Trace Detection Equipment. J. Forensic Sci, 58(5):1336-40. 1 Science and Engineering Directorate, Canada Border Services Agency

Instant forensic detection for drugs and explosives

For the first time ever you can get on-the-spot trace readings in seconds, with forensically acceptable results that offer absolute certainty. Easy to transport and operate, the Scentinel® mobile detection device is rapidly being adopted by major law enforcement and security agencies around the world, proving itself totally reliable time after time.

Scentinel® is currently adopted by:

- UK law enforcement agencies
- Canadian Border Services Agency
- US Government

Scentinel® has been approved for use by:

- CAST (UK Home Office)
- UK Defence Science & Technology Lab (DSTL)



anywhere, everywhere

The Scentinel® mobile detection device is a completely self-contained unit that can be easily transported, deployed, calibrated and set up within minutes of reaching the location of interest. It's the most flexible and reliable detection system available, ideal for on-the-spot analysis in a wide range of situations.

“Unlike commercial airport-style scanners, Scentinel analyses target analytes, such as drugs and explosives, within seconds, by discriminating substances by mass rather than molecular cross section. An analogy would be trying to identify squash balls in the presence of ping pong balls - size wouldn't be sufficient; measuring their mass would tell them apart easily. This type of trace detection is achieved very rapidly - precisely the reason why Scentinel has gained popularity with the Canadian Border Security Agency and other authorities using trace detector technologies. ”

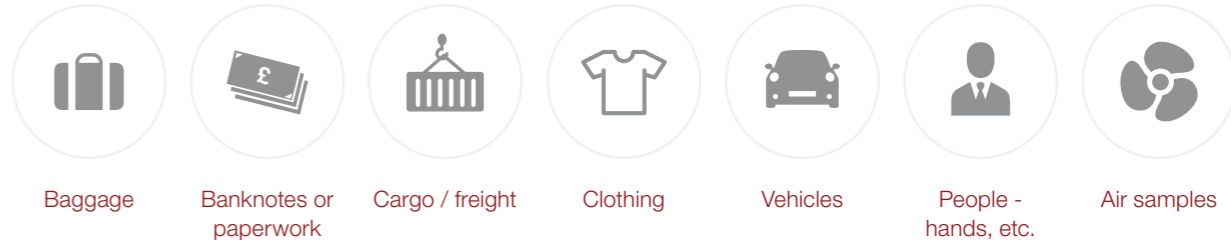
Richard Sleeman, Scientific Director, Mass Spec Analytical

results in under four seconds

The mobile Scentinel® is flexible and capable of swiftly producing forensically acceptable results from many types of items, as listed below. Each sample is analysed and the result interpreted in less than four seconds. The results are displayed using a simple red/green indicator, removing the need for the operator to interpret the significance of the results.

The system is capable of detecting extremely small quantities of explosives or drugs (less than a billionth of a gram) and is able to identify when items in question have come into contact with illicit substances.

The forensically acceptable results provide absolute accuracy. The rates of false positive and false negative are near to zero, especially in comparison to technologies such as ion mobility spectrometry and other screening devices.





transport, buildings and events

The mobile Scentinel® is currently being used at some of the world's biggest sporting and entertainment events to ensure the venue, surrounding areas and nearby vehicles are free from explosives. It's also perfect for political summits, business conferences, airports, railway terminals, shopping malls – anywhere there may be a terrorist threat. Swabs are taken from a variety of surfaces. A large number of explosives compounds can be screened simultaneously in seconds.



cargo and freight

The mobile Scintinel® analyses high volume air samples extracted from air freight and sea freight containers – without the need to open, unpack or disturb the contents. Simultaneous detection of explosives and taggants means that an entire container or pallet of air freight can be quickly screened for multiple explosives and related compounds.



people and personal effects

The mobile Scentinel® is capable of analysing passes, personal effects and other items from people moving through a checkpoint scenario. Traces of multiple explosives and taggants can be identified in under 4 seconds, enabling a throughput of over 900 people an hour. The speed and accuracy mean it is far more cost effective than alternative systems, enabling 100% of people to be screened.

so simple

The device is incredibly easy to operate – it comes with expert and non-expert interfaces so any user can immediately get to work. The non-expert user interface provides step-by-step instructions.

Step 1



Sample

Swab the area or extract an air sample from a container.

Step 2



Analyse

Analysis takes less than four seconds.

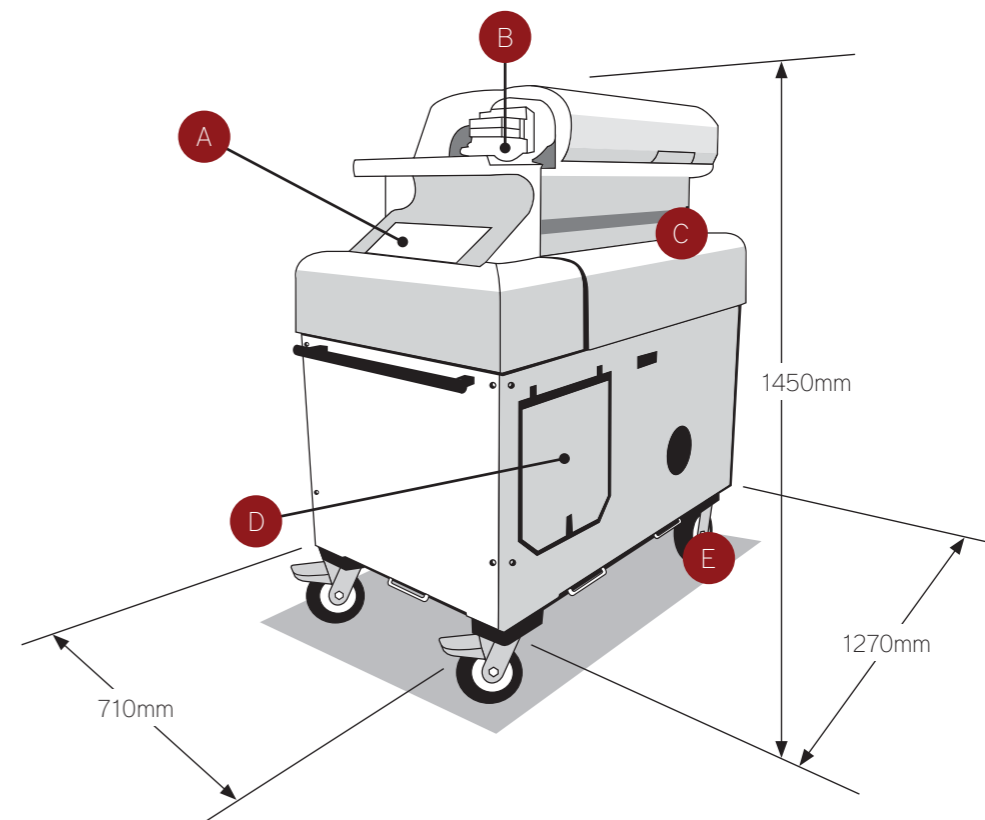
Step 3



Instant results

Results are displayed using a simple red/green indicator.

product dimensions and key features



- A Control panel
- B Sample input (Thermal Desorber Ion Source)
- C Sciex Mass Spectrometer
- D Ancillary equipment enclosure
- E Heavy duty mobile trolley

typical detectable compounds

A variety of interference tests have been performed on the system by independent government bodies. Unlike the commonly deployed IMS systems which are available, the Mass Spec mobile detector enjoys near zero false positive and false negative rates. Tests using substances known to cause issues with IMS based equipment, such as some perfumes, hand creams etc. have no influence on the detection capabilities of the Scentinel® system.

Scentinel® is future proof and can be programmed to target threats as and when they arise.

Drugs:

Opiates – Diacetylmorphine (Heroin) in Hydrochloride and base forms, Morphine

Cannabis – Resin & Herbal

Cocaine – Hydrochloride and base forms

Benzodiazepines – Diazepam, Temazepam

Barbiturates – Barbitol, Phenobarbital

Amphetamine type substances – MDMA, MDA,

MDEA, Methamphetamine, Methadone

Ketamine

BZP

Precursor materials

Explosives

EGDN – Ethyleneglycoldinitrate

NG – Nitroglycerine

DNT – Dinitrotoluene

TNT – Trinitrotoluene

PETN – Pentaerythritol tetranitrate

RDX – Cyclotrimethylenetrinitramine

HMX – Cyclotetramethylene Tetranitramine

DMNB – 2,3-dimethyl 2,3-dinitrobutane

Peroxide explosives – HMTD & TATP

Further reading:

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